

Claims

1. A single walled carbon nanohorn adsorptive material, characterized by comprising a lanthanide metal deposited on a single walled carbon nanohorn, and having methane adsorptivity.
2. The single walled carbon nanohorn adsorptive material according to claim 1, characterized in that the lanthanide metal is deposited on the single walled carbon nanohorn in an amount not less than 0.01 mmol and not more than 5 mmol per 1 g of the single walled carbon nanohorn.
3. The single walled carbon nanohorn adsorptive material according to claim 1 or 2, characterized in that the lanthanide metal is any of the group consisting of La, Ce, Pr, Nd, Pm, Sm, Eu, Gd and Tb.
4. A method for producing a single walled carbon nanohorn adsorptive material, characterized in that a lanthanide metal is deposited on a single walled carbon nanohorn by suspending the single walled carbon nanohorn in ethanol, adding a predetermined amount of an ethanolic lanthanide nitrate solution, performing sonication, and evaporating to dryness.
5. The method for producing a single walled carbon nanohorn adsorptive material according to claim 4, characterized in that the single walled carbon nanohorn is oxidized by heating in flowing oxygen before suspending it in ethanol.